Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Canceled)

2. (Currently Amended) An electric motor comprising a rotor equipped with magnets and a stator having a plurality of slots, wherein:

said rotor or said stator is divided into 4 or 4n (n indicates an integer, 4 forms one group) pieces in an axial direction, and an axial length and an electrical angle of said each piece, assuming an axial length of said one group of said rotor core or said stator core as 2L, with L being an axial length dimension, said axial direction as a X-axis , an axial center as x=0, and electromagnetic exciting force in a radial direction as F(x), on the basis of following three relational formulas:

$$\int_{-L}^{L} F(x)dx = 0$$

$$\int_{-L}^{L} xF(x)dx = 0$$

$$F(-x) = -F(x)$$

are set according to a relationship between an equivalent axial length and an equivalent position shifted between said pieces in a circumferential direction and are arranged in a setting order, and

an axial length of said each piece of said one group of said four pieces, as said equivalent axial length, is respectively set to any axial length within a range from ~~0.19L, 0.81L, 0.81L, and 0.19L to 0.39L, 0.61L, 0.61L, and 0.39L,~~ 0.19L to 0.39L, 0.81L to 0.61L, 0.814L to 0.61L or from 0.19L to 0.39L, and effective pole opening angles are arranged in a circumferential direction as phase difference of electrical angles of said neighboring pieces equivalent to 0, π, 0, and π.

3. (Currently Amended) An electric motor comprising a rotor equipped with magnets and a stator having a plurality of slots, wherein:

said rotor or said stator is divided into 4 or 4n (n indicates an integer, 4 forms one group) pieces in an axial direction, and an axial length and an electrical angle of said each piece, assuming an axial length of said one group of said rotor core or said stator core as 2L, with L being an axial length dimension, said axial direction as a ~~K-axis~~ X-axis, an axial center as x=0, and electromagnetic exciting force in a radial direction as F(x), on the basis of following three relational formulas:

$\int_{-L}^{L} F(x)dx = 0$

$\int_{-L}^{L} xF(x)dx = 0$

$F(-x) = -F(x)$ to a relationship between an equivalent axial length and an equivalent position shifted between said pieces in a circumferential direction and are arranged in a setting order, and

an axial length of said each piece of said one group of said four pieces, as said equivalent axial length, is set on the basis of 1:2:2:1, ~~is set to any axial length~~ within a range of ±5% of a total axial length of said one group of said four pieces, and effective pole opening angles are arranged in the circumferential direction as a phase difference of electrical angles of said neighboring pieces equivalent to 0, π, 0, and π.

4. (Currently Amended) An electric motor comprising a rotor equipped with magnets and a stator having a plurality of slots, wherein:

said rotor or said stator is divided into 6 or 6n (n indicates an integer, 6 forms one group) pieces in an axial direction, and an axial length and an electrical angle of said each piece, assuming an axial length of said one group of said rotor core or said stator core as 2L, with L being an axial length dimension, said axial direction as a X-axis , an axial center as x=0, and electromagnetic

exciting force in a radial direction as F(x), on the basis of following three relational formulas:

$$\int_{-L}^{L} F(x)dx = 0$$

$$\int_{-L}^{L} xF(x)dx = 0$$

$$F(-x) = -F(x)$$

are set according to a relationship between an equivalent axial axial length and an equivalent position shifted between said pieces in a circumferential direction and are arranged in a setting order, and

an axial length of said each piece of said one group of said six pieces, as said equivalent length, on the basis of 0.25L, 0.50L, 0.25L, 0.25L, 0.50L, and 0.25L, is respectively set ~~to any axial length~~ within a range of ±5% of a total axial length of said one group of said six pieces,

or within a range from ~~0.25L, 0.50L, 0.25L, 0.25L, 0.50L, and 0.25L to 1/3L, 1/3L, 1/3L, 1/3L, 1/3L, and~~ 0.25L to 1/3L, from 0.50L to 1/3L, from 0.25L to 1/3L, from 0.25L to 1/3L, from 0.50 to 1/3L or from 0.25 to 1/3L, and effective pole opening angles are arranged in the circumferential direction as a phase difference of electrical angles of said neighboring pieces equivalent to 0, π, 0[[,]] π, 0 ~~and~~ π.

5. (Original) An electric motor comprising a rotor equipped with magnets and a stator having a plurality of slots, wherein:

said rotor or said stator is divided into 6 or 6n (n indicates an integer, 6 forms one group) pieces in an axial direction, and a longitudinal length and an electrical angle of said each piece, assuming an axial length of said one group of said rotor core or said stator core as 2L, with L being an axial length dimension, said axial direction as a X-axis, an axial center as x=0, and electromagnetic exciting force in a radial direction as F(x), on the basis of following three relational formulas:

$$\int_{-L}^{L} F(x)dx = 0$$

$$\int_{-L}^{L} xF(x)dx = 0$$

$$F(-x) = -F(x)$$

are set according to a relationship between an equivalent axial length and an equivalent position shifted between said pieces in a circumferential direction and are arranged in a setting order, and

an axial length of said each piece of said one group of said six pieces, as said equivalent length, on the basis of 0.25L, 0.50L, 0.25L, 0.25L, 0.50L, and 0.25L, is set to any axial length within a range of ±5% of a total axial length of

said one group of said six pieces, and effective pole opening angles are arranged in the circumferential direction as a phase difference of electrical angles of said neighboring pieces equivalent to 0, π, 0[[,]] π, 0 ~~and~~ π.

6. (Canceled)

7. (Currently Amended) An electric motor comprising a rotor equipped with magnets and a stator having a plurality of slots, wherein:

said rotor or said stator is divided into 4 or 4n (n indicates an integer, 4 forms one group) pieces in an axial direction, and electromagnetic exciting force in a radial direction having a practically same amplitude is applied to said each piece, and

~~assuming~~ when an axial length of said one group of said rotor or said stator is set as 2L with L being an axial length dimension, said each piece of said one group of said four pieces, as an equivalent axial length, is respectively set ~~to any axial length~~ within a range from ~~0.19L, 0.81L, 0.19L, 0.81L to 0.39L, 0.61L, 0.61L, and 0.39L,~~ 0.19L to 0.39L, 0.81L to 0.61L, 0.81L to 0.61L or 0.19 to 0.39L, and effective pole opening angles are arranged in the circumferential direction as a phase difference of electrical angles of said neighboring pieces equivalent to 0, π, 0, and π.

8. (Currently Amended) An electric motor composed of a rotor equipped with magnets and a stator having a plurality of slots, wherein:

said rotor or said stator is divided into 4 or 4n (n indicates an integer, 4 forms one group) pieces in an axial direction, and electromagnetic exciting force having a practically same amplitude in a radial direction is applied to said each piece, and

an axial length of said each piece of said one group of said four pieces, as an equivalent axial length, on the basis of 1:2:2:1, is set to any axial length within a range of ±5% of a total axial length of said one group of said four pieces, and effective pole opening angles are arranged in the circumferential direction as a phase difference of electrical angles of said neighboring pieces equivalent to 0, π, 0, and π.

9. (Currently Amended) An electric motor comprising a rotor equipped with magnets and a stator having a plurality of slots, wherein:

said rotor or said stator is divided into 6 or 6n (n indicates an integer, 6 forms one group) pieces in an axial direction, and electromagnetic exciting force in a radial direction having a practically same amplitude is applied to said each piece, and

~~assuming~~ when an axial length of said one group of said rotor or said stator is set as 2L with L being an axial length dimension an axial length of, said each piece of said one group of said six pieces, as said equivalent axial length, on the basis of 0.25L, 0.50L, 0.25L, 0.25L, 0.50L, and 0.25L, is set to any axial length within a range of ±5% of a total axial length of said one group of said six pieces, and effective pole opening angles are arranged in the circumferential direction as a phase difference of electrical angles of said neighboring pieces equivalent to 0, π, 0[[,]] π, 0 ~~and~~ π.

10. (Currently Amended) An electric motor according ~~to any of Claims 1 to 9,~~ Claim 2 wherein said effective pole opening angles of said each piece are set to an angle shifted by one half of said slot between said pieces.

11. (Currently Amended) An electric motor according ~~to any of Claims 1 to 10,~~ Claim 2, wherein when said electric motor is a linear motor, said rotor and said stator are in a shape developed on a plane.

12. (Canceled)

13. (Presently Presented) An electric motor according to Claim 3, wherein said effective pole opening angles of said each piece are set to an angle shifted by one half of said slot between said pieces.

14. (Presently Presented) An electric motor according to Claim 4, wherein said effective pole opening angles of said each piece are set to an angle shifted by one half of said slot between said pieces.

15. (Presently Presented) An electric motor according to Claim 5, wherein said effective pole opening angles of said each piece are set to an angle shifted by one half of said slot between said pieces.

16.-17. (Canceled)

18. (Presently Presented) An electric motor according to Claim 3, wherein when said electric motor is a linear motor, said rotor and said stator are in a shape developed on a plane.

19. (Presently Presented) An electric motor according to Claim 4, wherein when said electric motor is a linear motor, said rotor and said stator are in a shape developed on a plane.

20. (Presently Presented) An electric motor according to Claim 5, wherein when said electric motor is a linear motor, said rotor and said stator are in a shape developed on a plane.